

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of: D. Messerli et al.

Application No.: 09/497,123

Art Unit: 3738

Filed: February 3, 2000

Examiner: B. Pellegrino

For: END MEMBER FOR A BONE
FUSION IMPLANT

Attorney Docket No.: 8932-114

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1. Reply Brief in Response to Examiner's Answer (5 pages)

Total Number of Pages (including this sheet): 6 pages

Date January 6, 2003

Respectfully submitted,

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Enclosures

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REPLY BRIEF IN RESPONSE TO EXAMINER'S ANSWER

Assistant Commissioner for Patents

BOX AF

Washington, D.C. 20231

Dear Sir or Madam:

In response to the Examiner's Answer dated November 5, 2002, please enter and consider the following Reply submitted in accordance with 37 CFR § 1.193(b).

Related Appeals and Interferences

With regard to the Examiner's statement regarding related appeals and interferences, it is noted that the Brief on Appeal contains the explicit statement that there are no related appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal. In view of the foregoing, it is believed that no additional information is required.

Status of Claims

Applicants appreciate the indication by the Examiner that claims 18 and 19 contain allowable subject matter and would be allowable if rewritten in independent form. The claims now remaining on appeal are claims 1, 2, 7, 9, 14, 15, and 17.

Grouping of Claims

With regard to the Examiner's statement about the grouping of the claims, it is first noted that the claims were initially placed into three groups in the Brief on Appeal, which has now been reduced to two groups with the indication by the Examiner that claims 18 and 19 would be allowable in independent form. The first group (claims 1, 7, 9, 14, 15, and 17) is directed to an end member comprising, *inter alia*, a first portion with a top surface and having a first channel, and the second group (claim 2) is directed to an end member comprising, *inter alia*, a first portion with a top surface wherein the top surface further comprises a plurality of teeth provided in a two dimensional array with the teeth being spaced apart from one another for interlocking with the bone. In the final rejection dated October 26, 2001, the Examiner applied different references against claims of the second group as compared to the first group, *i.e.*, only the Rabbe reference was cited by the Examiner against the second group as suggesting teeth. In view of the foregoing, it is believed that Applicants' grouping of the claims into two distinct groups is warranted.

The Biedermann '451 Patent Does Not Disclose, Teach or Suggest a Top Surface Having A Channel Extending From the Edge for Receiving a Surgical Instrument

Section 10 of the Answer, entitled *Grounds of Rejection*, explains the Examiner's position that Fig. 7 of Biederman purportedly shows a channel formed between the teeth 15 that protrude outward from the edge. The Examiner further argues that Fig. 7 can be interpreted to show a second channel such that they run anterolaterally. However, the Examiner does not show a top surface **having** a channel as expressly recited in claim 1. Claims 14 and 15 dependent from claim 1 define additional features consistent with this claim interpretation. Claim 14 requires that "the top surface **has** a second channel" and claim 15 requires that "the first and second channels run in an anterolateral direction".

Claim 1 requires a top surface **having** a channel. The top surface is that which engages bone. As explained in the Brief on Appeal, the claimed channel is a groove, furrow or trench for receiving a surgical instrument. The American Heritage College Dictionary (3rd Ed.). While the Examiner contends that Fig. 7 shows a channel, there is no showing of a top surface which engages bone **having** a channel. Surface 12 of Biederman is flat and does not have a "channel,"

(i.e. furrow, trench, or groove). The area between prongs 15 is just space and is not part of the top surface. In contrast, the end member according to claim 1 has "a top surface ... having...a first channel extending from the edge". Moreover, the Biedermann '451 patent does not teach, suggest, or disclose that the space between prongs 15 is for receiving a surgical instrument. Instead, prongs 15 are inserted into recesses 9, 10, 9', 10' of jacket 1 so that any space between the prongs is contained within the jacket and cannot be used to receive a surgical instrument.

As a result, independent claim 1, and claims 7, 9, 14, 15, and 17 dependent thereon are not anticipated by the Biedermann '451 patent and, therefore, applicants respectfully request the Board to reverse the rejection of these claims under 35 U.S.C. § 102.

The Rabbe '197 Patent Does Not Disclose, Teach or Suggest a Top Surface Having A Channel for Receiving a Surgical Instrument

In section 10 of the Answer, the Examiner's position is that Fig. 3 of Rabbe shows first and second channels 47 in a top surface of member 22. However, Rabbe does not show a top surface **adopted and configured to engage bone and having a channel for receiving a surgical instrument**, as recited in claim 1. The Rabbe '197 patent does not disclose, teach, or suggest a "first channel" in the top surface "extending from the edge for receiving a surgical instrument," as recited in claims 1 and 2. Instead, the mounting slots 47 disclosed in the Rabbe '197 patent are configured to support a separate end cap 23 that covers member 22, and cap 23 is what engages bone. (See e.g. col. 6, lines 52-54). Moreover, end cap 23 is configured to be held in position, i.e. covering mounting slots 47, "particularly when the replacement body is disposed between the adjacent intact vertebrae V_2 and V_4 ." (Col. 6, lines 61-65). In this manner, end cap 23 actually prevents a surgical instrument from being received in slots 47. The top surface of end cap 23 does not have a channel. Thus, the Rabbe '197 patent does not anticipate independent claims 1 and 2 under 35 U.S.C. § 102.

The Rabbe '197 Patent Does Not Disclose, Teach or Suggest an End Member with "a Shoulder Sized to Rest on an Edge of the Implant When the Second Portion Is Inserted in the Bore of the Implant"

As explained in the Brief on Appeal, what the Examiner cites as being a "shoulder" in the Rabbe '197 patent, *i.e.* first portion 35, is in fact not "a shoulder sized to rest on an edge of the implant when the second portion is inserted in the bore of the implant," as recited in independent claims 1 and 2. In section 10 of the Answer, the Examiner asserts that first portion 35 or shoulder is "fully capable of being sized to rest on a corresponding edge of a properly dimensioned implant." However, the Examiner neglects to consider that member 22 identified by the Examiner has an annular surface with internal threading and member 22 goes *outside* of the threaded cylindrical body 21. (See Fig. 3). In this configuration, it is clear that element 35, which the Examiner alleges to be a shoulder, is not *sized to rest on an edge of the implant*, as flange 35 never contacts body 21. In fact, since the second portion of the Rabbe '197 patent goes outside of body 21, the alleged shoulder must necessarily be sized larger than body 21, and is not capable of being *sized to rest on an edge* thereof.

Thus, for this additional reason, the Rabbe '197 patent does not anticipate independent claims 1 and 2 of the present application.

The Rabbe '197 Patent Does Not Disclose, Teach or Suggest an End Member with a "Plurality of Teeth Provided in a Two Dimensional Array" as Recited in Claim 2

Claim 2 recites that the teeth are provided in a two dimensional array with the teeth being spaced apart from one another for interlocking with the bone. As teeth 91 in the Rabbe '197 patent form a single ring and not a two dimensional array, Applicants submit that claim 2 is patentable over this reference for this additional reason.

Thus, the Rabbe '197 patent does not anticipate independent claim 2 and, therefore, applicants respectfully request the Board to reverse the rejection of claims 1, 2, 9, and 14 under 35 U.S.C. § 102.

In summary, the cited references do not disclose, teach, or fairly suggest the invention as presently claimed. Reversal of the Examiner and allowance of all the claims are accordingly respectfully requested.

Respectfully submitted,



Date January 6, 2003

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